The Ohio Works First Evaluation: Findings From a Longitudinal Survey of Participants

June 2003

prepared for

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by

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Executive Summary

In 1997, the Ohio Department of Job and Family Services (ODJFS) contracted with Macro International Inc. to conduct a five-year evaluation of Ohio Works First (OWF). Upon completion, the evaluation will provide information in response to the following three questions.

- How did Ohio's County Departments of Job and Family Services (CDJFS) implement OWF?
- Did OWF lead to greater self-sufficiency[1] and less welfare dependency for program clients?
- Which county-level practices or services are associated with greater self-sufficiency and less welfare dependency for OWF clients?

This report addresses the second and third questions using information gathered through two waves of data collection on a sample of 1,028 individuals who received OWF in June 2000. We surveyed these individuals to assess what OWF program interventions they received during a baseline period (wave 1) and to determine their situation at least six months later (wave 2). By comparing information supplied by the survey respondents at these two points in time, we can determine whether individuals reduced their dependence on welfare during this period and which OWF program interventions worked best in achieving this aim.

We focused on changes that occurred in four outcome measures between the first and second interviews to determine the extent to which individuals were able to improve their circumstances during this time period. The critical findings for the four outcome measures are:

Employment: Sixty-one percent of those off OWF at the wave 2 interview were employed.

Wages: The percentage of individuals earning more than $1,500 a month increased from 7 percent at wave 1 to 19 percent at wave 2.

Welfare Status: Seventy-one percent of those receiving OWF cash assistance in June 2000 were not on OWF when the second interview occurred.

Self-Sufficiency: Sixty-five percent of individuals identified as having low self-sufficiency[2] at wave 1 increased their level of self-sufficiency by the time of the second interview. The percentage of individuals with a high level of self-sufficiency increased from 5 percent at wave 1 to 15 percent at wave 2.

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[1] Self-sufficiency is defined as an individual's ability to meet his or her basic needs without government assistance.

[2] A self-sufficiency index measuring an individual's dependence on government programs was developed and used to group individuals into three levels of self-sufficiency. The lower an individual's self-sufficiency score, the more government programs he or she used.

A multivariate analysis was used to assess whether specific OWF program interventions and county, assistance group, and individual characteristics correlate with changes in the four outcome measures. Key findings from this analysis are presented below.

- Outcomes do not vary with differences in county size and unemployment rate.

- The presence of a spouse or partner in the household reduces the odds that an individual will be employed. Otherwise, outcomes do not vary with the size and composition of OWF assistance groups.

- The longer an individual has been on OWF, the smaller his or her wage gains, and the less likely he or she will be to leave OWF.

- Individuals who have completed high school are more likely to be employed and to be more self-sufficient than those who have not.

- The only OWF work activities that were associated with positive outcomes for OWF recipients were vocational and postsecondary education and unsubsidized employment. More specifically:

  — Individuals enrolled in vocational education programs at the time of their wave 1 interview tended to show greater gains in self-sufficiency at wave 2 than others.

  — Those enrolled in postsecondary education programs at wave 1 were more likely to be employed and to have increased their level of self-sufficiency at wave 2 than others.

  — The individuals in our sample who were engaged in unsubsidized employment at the time of their first interview were more likely to be employed, off OWF, and more self-sufficient at the time of their second interview than those who were not working when first interviewed.

I. Introduction

This report presents the results of an analysis of the effects of Ohio Works First (OWF) on individuals participating in the program in June 2000. It is the second in a series of three reports that is based on a longitudinal survey of OWF participants conducted to examine the relationship between OWF interventions and participant outcomes over time.[3]

OWF is Ohio's welfare reform initiative that began in 1997 as a result of the passage of the Personal Responsibility and Work Opportunity Reconciliation Act by the U.S. Congress. The Act established the Temporary Assistance for Needy Families (TANF) program, as a replacement for the Aid to Families with Dependent Children (AFDC) program. TANF stressed initiatives and programs for directing welfare recipients into employment in order to decrease their dependence on welfare and increase their level of self-sufficiency. It required that all cash assistance recipients participate in some type of employment or training activity and instituted a five-year time limit on welfare benefits in an attempt to eliminate long-term welfare dependency. In other regards, the federal statute left much of the design of the program to state governments.

As a result, Ohio established the OWF cash assistance program and the Prevention, Retention, and Contingency (PRC) program to assist individuals with temporary or emergency needs. Key features of the OWF program include a 36-month time limit on eligibility[4] and a generous earned income disregard that ignores a portion of employment income in the calculation of benefits. In addition, childcare, Medicaid, and Food Stamp benefits are extended to individuals leaving OWF to help them transition off cash assistance.

Because the welfare system in Ohio is supervised by the state and administered by the counties, Ohio delegated authority to its 88 counties to provide county-specific solutions to creating a "work first" philosophy. The County Departments of Job and Family Services (CDJFS) were charged with tailoring work and training programs and the county PRC program to meet local needs.

This study looks at the relationship between CDJFS work and training interventions and outcomes such as employment, earnings, welfare independence, and self-sufficiency.

[3] The first report in the series, released in December 2002, provided a baseline description of participant characteristics and circumstances at the time of the first survey.

[4] Up to 24 additional months of assistance are available if an individual meets hardship criteria established by the local County Department of Job and Family Services.

II. Methodology and Approach

A. Description

The information for this outcomes analysis was generated by the first two waves of a three-wave panel survey of individuals who were receiving cash assistance in June 2000 and who were "work required."[5] Since the study was focused on the relationship between OWF interventions and employment and self-sufficiency outcomes, we constructed our sample from the population of individuals who received OWF in both January and June 2000 in order to increase the likelihood that sample members had been exposed to OWF interventions for at least six months. In total, there were 36,233 adults meeting these requirements.

From this population, we drew a random sample of participants from 78 of Ohio's 88 counties. In the other 10 counties, we oversampled participants to ensure that the sample sizes would support county-level analyses.[6] The total sample size approximated 2,000 adults.[7]

In the first two waves, we collected information on the kinds of employment or training activities in which the OWF clients participated during these periods as well as information on their employment, wages, receipt of OWF cash assistance, and levels of self-sufficiency. Table 1 describes implementation details of each wave. In total, 1,028 individuals responded to both waves and therefore were included in this analysis.[8]

Table 1. Implementation Details of Waves 1 and 2

Item	Wave 1	Wave 2
Time Span	Interviews were conducted between August 2000 and April 2001	Interviews were conducted between May 2001 and February 2002
Restrictions	Restricted to individuals who last received cash assistance within three months of the interview[9]	Restricted to individuals who were interviewed for wave 1 at least six months before[10]
Focus	Focus on describing program participation in the most recent three months on cash assistance	Focus on describing current program participation, employment, and self-sufficiency status

[5] Under OWF, able-bodied adults were required to participate in a work activity for at least 30 hours a week.

[6] These 10 counties were Belmont, Clark, Franklin, Gallia, Greene, Hamilton, Licking, Lucas, Scioto, and Stark.

[7] The original sample included 1,951 individuals. This was supplemented by a sample within the 10 counties of interest.

[8] This total represents 83.5 percent of those responding to the first wave. A large majority of nonrespondents in this wave and the first wave were composed of individuals who could not be found even with extensive tracking.

[9] The survey's major focus was on describing the benefits and service interventions received while on welfare. This information would be less accurately recalled as the time between participation and the interview increased.

[10] The gap of at least six months between interviews allowed us to examine medium-term effects of the OWF program.

Figure 1 demonstrates the relationships explored in this report.

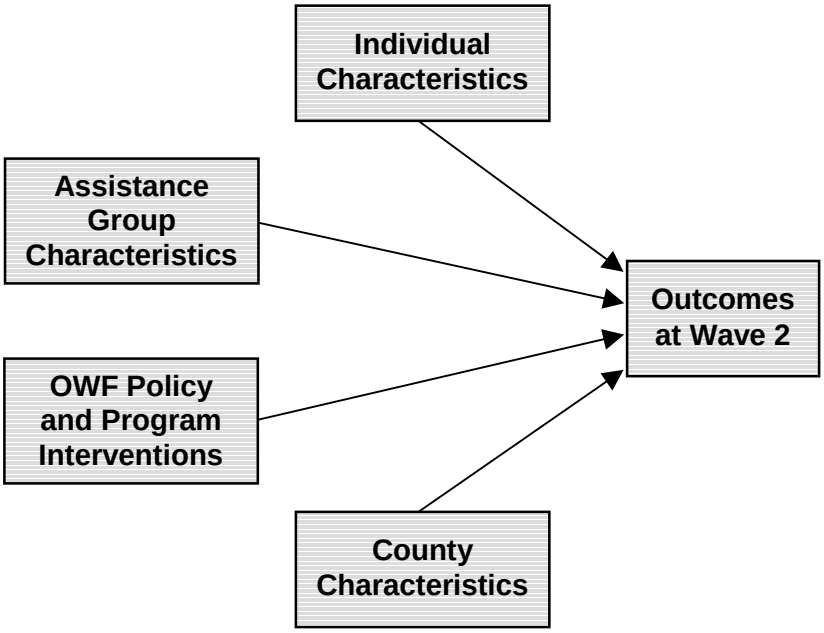

Figure 1. Relationship of OWF Interventions and Individual, Assistance Group, and County Characteristics to Outcomes at Wave 2

Specifically, the report provides information on the degree to which various OWF policy and program interventions are associated with the following outcomes:

- Employment
- Increased Earnings
- Independence From OWF
- Increased Self-Sufficiency

OWF interventions include whether the individual received job-related assistance through employment and training programs. Our goal was to determine the degree to which these interventions correlate with positive changes in outcomes for OWF participants, controlling for individual and assistance group (AG) characteristics and some county characteristics.

B. Study Limitations

The results contained in this study should be considered in light of the following limitations.

When survey data are used, non-response for the survey may lead to bias that can skew the results. Low-income populations are difficult to locate and subsequently to track and re-interview. Non-response bias will affect our ability to generalize to the population from which the sample is drawn if the non-responders differ from the responders on key characteristics that affect outcomes. To offset this bias, we compared key demographics of survey respondents with demographics of the population from which the sample was drawn and reweighted responses based on this comparison. This would yield results that correct for non-response bias. [11]

A second concern with survey data is that the accuracy of survey results depends on the respondent's understanding of the question and recall of information. For instance, when we collect information on employment or wages over the last six months to two years, some individuals may not remember this information precisely. In addition, the set of possible responses presented to the respondent may not match the situation of the respondent. We addressed these issues by shortening recall time frames and by asking open-ended questions when appropriate, reliable, multiple-choice responses could not be developed.

Finally, the study does not measure whether the OWF program, as a whole, or any specific intervention caused changes in outcomes. A study that proves causality requires that sample members be randomly assigned to OWF or to an alternative program (such as the previous AFDC program) and the results compared. In such a study, any significant results would be attributable to the OWF program characteristics. Because OWF was implemented statewide, no randomized study was feasible. This study, however, does provide a design that allows us to examine whether changes in outcomes have occurred and whether the interventions provided by OWF are correlated with the changes.

[11] A post-stratification methodology was used to accomplish this. The reweighting adjusted original sample weights.

III. Results

A. Descriptive Analysis of Wave 2 Outcomes

This section provides descriptive information on:

- The degree to which individuals were employed during wave 2
- The change in earnings between wave 1 and wave 2
- The degree to which individuals were on cash assistance during wave 2
- The change in self-sufficiency between wave 1 and wave 2

The percentages reported in this section are representative of all individuals who were OWF participants in June 2000 and were required to participate in work activities in June 2000.[12]

60.9 percent of those off OWF at wave 2 were employed.

Figure 2 compares employment of those on and off OWF at wave 2. Many individuals who have left the program have been successful in obtaining employment. Of those still receiving OWF cash assistance, almost a third were employed, albeit not at a job where the overall earnings were sufficient to make them ineligible for cash assistance.

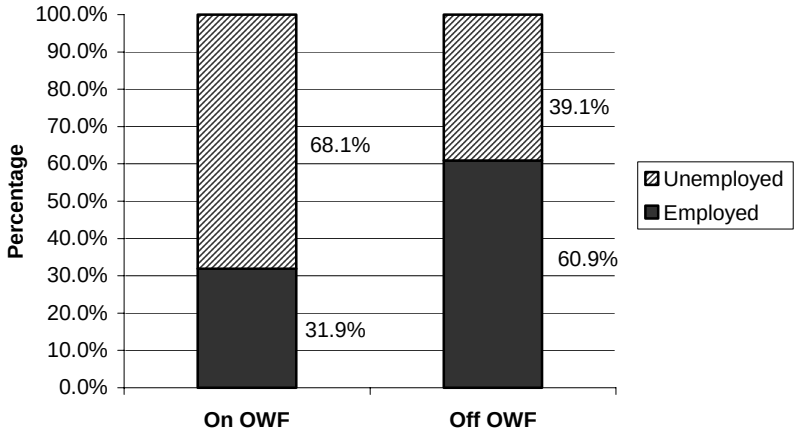

Figure 2. Employment Status at Wave 2, by Receipt of Assistance

[12] Survey responses have been weighted to reflect the population. The weights reflect a multiplier that is applied to each individual's responses. The results are interpreted as reflecting the entire population under study (work-required individuals receiving OWF cash assistance in June 2000) and not only those who responded to the survey.

19 percent of those employed at wave 2 were earning more than $1,500 per month.

Figure 3 compares the wage levels of those employed at the time of the wave 1 and wave 2 interviews. On average, individuals increased their wages and more were in the upper earnings categories at the time of the second interview. The data indicate that:

- The percentage of individuals earning more than $2,500 a month increased from 2 percent to 5 percent.
- The percentage of individuals earning between $1,500 and $2,500 a month increased from 5 percent to 14 percent.
- The percentage of individuals earning between $500 and $1,500 a month increased from 66 percent to 73 percent.

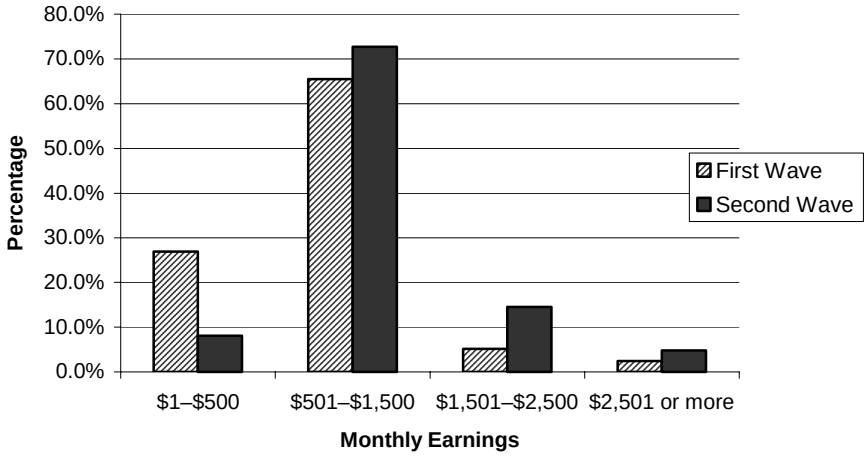

Figure 3. Monthly Earnings at Waves 1 and 2

As indicated in Figure 3, the number of individuals earning $500 a month or less decreased dramatically (from 26.9 percent to 8.1 percent). The information presented in Table 2 provides more detail on this change. The table shows that 82.7 percent of individuals in the lowest earnings group at wave 1 increased their earnings enough to enter another category by wave 2. It should be noted, however, that about half of those in the highest earnings group at wave 1 tended to be in a lower earnings group at wave 2. More than 39 percent of those earning $1,501 to $2,500 per month at wave 1 increased their earnings to more than $2,500 per month at wave 2.

Table 2. Earnings at Waves 1 and 2

Earnings at First Interview	Earnings at Second Interview				Total
	$1–$500	$501–$1,500	$1,501–$2,500	$2,501 or more	
$1–$500	17.3%	76.7%	6.0%	0.0%	100.0%
$501–$1,500	5.2%	78.7%	13.8%	2.3%	100.0%
$1,501–$2,500	0.0%	2.3%	58.3%	39.4%	100.0%
$2,501 or more	0.0%	16.9%	32.5%	50.6%	100.0%
All Levels	8.0%	72.7%	14.5%	4.8%	100.0%

Almost three quarters of the population were off OWF at wave 2.

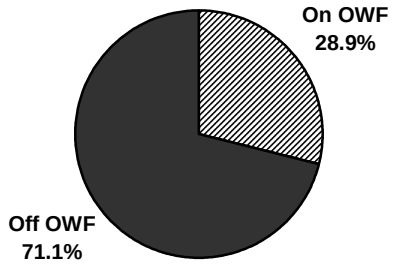

Figure 4. Percentage of Population by OWF Status at Wave 2

As shown in Figure 4, about 71.1 percent of those who received OWF cash assistance in June 2000 were not receiving such assistance during wave 2. It should be noted that individuals who were continuously on cash assistance since October 1997 would have reached their 36-month time limit at the end of October 2000. This may have been the reason some of those surveyed were no longer receiving cash assistance.

Improvement in self-sufficiency is mixed.

Self-sufficiency is the goal of OWF. Full self-sufficiency is reached in steps, within which individuals wean themselves from the various assistance and entitlement programs offered by the government. A 12-item self-sufficiency index, measuring the individual's independence from government programs, was developed and used to chart progress from the wave 1 to the wave 2 interviews.[13] As Figure 5 shows, the percentage of individuals exhibiting the highest level of self-sufficiency increased from 5.4 percent to 15.4 percent.

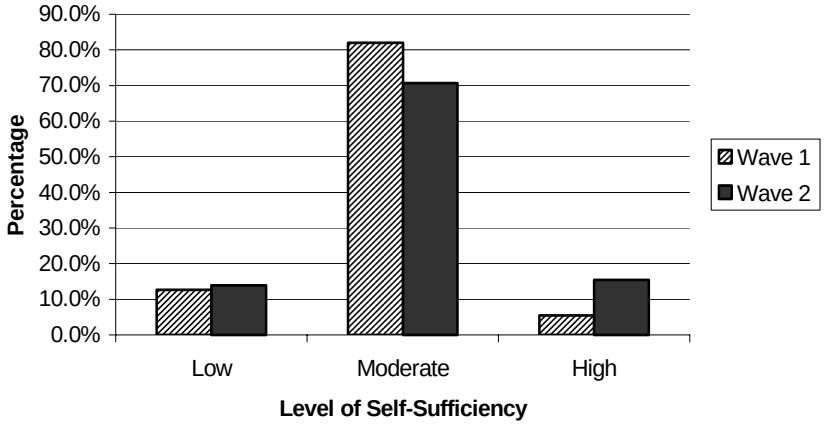

Figure 5. Self-Sufficiency Levels at Waves 1 and 2

Table 3 presents another perspective. This shows that 65.0 percent of individuals identified as having low self-sufficiency at wave 1 actually increased their self-sufficiency level at wave 2. Individuals with the highest level of self-sufficiency at wave 1 tended to be just as likely to regress to the next lower category as they were to maintain high self-sufficiency at wave 2.

Table 3. Self-Sufficiency Levels at Waves 1 and 2

Level of Self-Sufficiency at First Interview	Level of Self-Sufficiency at Second Interview			Total
	Low	Medium	High	
Low	35.0%	62.8%	2.2%	100.0%
Medium	11.2%	73.4%	15.4%	100.0%
High	5.2%	47.5%	47.3%	100.0%
All Levels	13.9%	70.7%	15.4%	100.0%

[13] This 12-item index largely measures the number of government assistance programs used by an individual. For purposes of presenting results, the 12 points were divided three ways: low self-sufficiency = 0–3 points, medium self-sufficiency = 4–7 points, and high self-sufficiency = 8–12 points. For more detail, see Appendix B.

B. Regression Analysis of Wave 2 Outcomes

The rest of this report is devoted to an outcomes analysis in which we seek to determine factors that are related to individuals' employment status, wages, likelihood of remaining on OWF (welfare dependence), and dependence on government programs (self-sufficiency level). The next two sections give details about how the analysis was done, while the final section presents the results of the analysis.

1. Method of Analysis

Our analysis was performed using a multivariate regression approach. This allowed us to examine the effect of a number of variables on the employment, wages, welfare dependence, and self-sufficiency levels of our sample population. The variables used in our analysis range from personal and AG-level characteristics such as age, gender, and AG size, to county-level characteristics such as population size and unemployment rate. OWF services received through the local CDJFS were also used as variables in the models.

We were particularly interested in examining the relationships between CDJFS policy and program interventions and respondent outcomes. We hoped to learn whether the various education, job search, and employment preparation activities respondents reported receiving through the CDJFS at the time of their wave 1 interview correlated with changes that occurred in their employment, wage, and self-sufficiency outcomes between waves 1 and 2. For each of these outcomes, we compared responses from the first and second interviews to determine whether there was improvement in the outcome by the time of the second interview.

Some of the questions we sought to answer were:

- Are differences in county economy or size related to changes in individual outcomes?
- Does the composition of an individual's OWF assistance group provide resources or act as a barrier for achieving positive outcomes?
- Are an individual's personal characteristics and welfare history important in determining outcomes, or do program interventions compensate for these factors?
- Are OWF policies and work activity requirements associated with positive changes in outcomes?

2. Variables and Hypotheses To Be Tested

Each of the variables used in the models is listed below along with one or more hypotheses about each variable's expected correlation with respondent outcomes. Detailed information about variable choice and hypothesis development can be found in Appendix A.

County Characteristics

One concern in this report is whether the environment exerts any influence on outcomes. Two measures of the environment are used in this analysis: county size as measured by population and county unemployment rate during 2000.

Expectations Regarding County Characteristics

- Unemployment Rates: We expect that high levels of unemployment will result in less opportunity for employment and wage increases; therefore, we expect that welfare dependency will be higher in areas of high unemployment, while self-sufficiency will be lower.

- Population Size: Our expectation is that more populous counties offer more employment opportunities for individuals. These counties also tend to have high-density urban centers with good transportation systems. We therefore expect that employment potential and wage increases will be higher in these areas, that welfare dependence will be lower, and that self-sufficiency will be higher.

AG Characteristics

The size and composition of an OWF AG can affect outcomes in several ways. Large AGs can provide resources in the form of additional persons to assist in the care of younger children or to provide income. On the other hand, large AGs composed of a single parent and many young children can pose substantial challenges to achieving positive outcomes. Resources such as transportation can also affect AG outcomes.

Expectations Regarding AG Characteristics

- AG Size and Children Under Age Six: Large AGs and those that include children under the age of six probably place a childcare burden on the adult wage earner and therefore may both be negatively associated with outcomes.

- AG Head Lives with a Spouse or Partner: Single-parent AGs are likely to show less positive outcomes than AGs with a spouse or partner due to the pressures of trying to make ends meet while taking care of the children. AGs with spouses and partners have more adult resources and therefore more flexibility to meet daycare and financial demands. Although a likely hypothesis might be that AGs with spouses and partners create greater potential for employment, they also may create a potential for relying on the spouse or partner for financial support.

Individual Characteristics

The foundation for success in many ways depends on an individual's background. Although we would like to consider the job market to be neutral to the backgrounds of individuals, it is not. In selecting individual characteristics, we were limited to demographic information available from our data. Information on barrier-related measures, such as whether the individual had learning disabilities or mental health or behavioral issues, was not collected within this study, and therefore these measures are not examined.

Expectations Regarding Individual Characteristics

- Welfare Dependence: The number of months an individual spent on OWF between October 1997 and his or her wave 1 interview is an indicator of welfare dependence. Our expectation is that the odds of employment, of leaving OWF, and of achieving greater self-sufficiency will be lower for those with more months on assistance.

- Gender and Ethnicity: Females and African Americans are less likely to obtain employment and experience wage increases than their counterparts, since these groups have not been traditionally favored by the labor market. Individuals with these characteristics are therefore more likely to be dependent on OWF and less likely to achieve self-sufficiency. It should be noted that males constitute only 8 percent of the respondents in wave 1.

- Education: With regard to education, our focus is on whether the lack of a high school education is related to outcomes, since many individuals within the population have not completed high school.

- Age: In general, we expect the odds of employment to be higher among older individuals. However, we also recognize that an individual's chances of becoming employed or experiencing one of the other outcomes may decline at some age. It should be noted that 73 percent of the individuals in this study are between the ages of 18 and 35. Only about 3 percent are over 50 years of age, where issues with employment would start to appear. With regard to welfare dependency, we would expect older individuals to be more dependent on welfare and to achieve less self-sufficiency.

OWF Policy and Program Interventions

OWF policy and program measures are in general expected to help individuals gain employment, transition off OWF, and raise their self-sufficiency. Seven types of activities that satisfy OWF work requirements are examined in the analysis. They are:

- **Postsecondary Education** provided by a community college, four-year, or other college
- **Unsubsidized Employment,** which is full- or part-time employment that is paid by the employer
- **Work Experience,** which is unpaid employment
- **Job Search,** which is assistance in seeking and securing employment
- **Vocational Education** in a specific skill area such as construction
- **Adult Basic Education** to increase basic math and reading skills
- **Alternative and Developmental Activities** such as mental health counseling or vocational rehabilitation that either supplement or replace other work activities to help families attain self-sufficiency

Expectations Regarding Policy and Program Interventions

In general, we expect that these OWF work activities will positively correlate with employment, wage, and self-sufficiency outcomes. Some of these activities will be more likely to correlate with outcomes than others. Unsubsidized employment begun while on OWF might be the best chance for individuals to realize employment in the future. Vocational education and postsecondary education might be expected to provide individuals with special skills to compete in the job market and to increase wages for those employed. Work experience provides individuals with on-the-job skills and may be associated with positive outcomes if quality placements are secured by the agency. Adult basic education and alternative and developmental activities are aimed at helping individuals surmount basic barriers that might prevent employment.

3. Results of the Regression Analysis

As described previously, we used separate regression models to explore the relationship of a number of variables to changes that occurred in the lives of survey respondents between the time of their wave 1 and wave 2 interviews, as measured by changes in employment, wages, welfare status, and self-sufficiency level.[14] These outcomes provide information on a particular aspect of the individual's transition to economic independence. While employment is the cornerstone for achieving independence, information on wages provides a perspective on whether this employment is adequate for achieving independence. Information on welfare status and self-sufficiency provides a perspective on the individual's use of public sources of assistance. The following summarizes the results of our regression analysis. [15]

County unemployment rate and county size are not associated with changes in outcomes.

As seen in Table 4, county level variables are not significant at the .05 level.[16] This is somewhat surprising in that we would expect employment and wage outcomes to be somewhat sensitive to the tightness in the labor market as manifested by the unemployment rate. In addition, the potential variation in employment opportunities that occurs between large urban and small rural counties might be expected to affect changes in employment and wages, but in fact it does not.

Table 4. Significance of Selected County Characteristics on Measuring Changes in Four Key Outcomes

Characteristics at Wave 1	Change from Wave 1 to Wave 2			
	Employment Status	Wages	OWF Status	Self-Sufficiency Level
County Unemployment Rate >= 7%	*	*	*	*
Large County (Pop >= 800,000)	*	*	*	*
Medium County [17] (Pop 100,000–799,999)	*	*	*	*

* No relationship

Likewise, changes in welfare dependence and self-sufficiency levels are not tied to unemployment. Thus, tightness in the labor market does not seem to result in greater or lesser

[14] Appendix B provides definitions of these outcomes.

[15] Appendix C presents the full regression results.

[16] In this and all the analyses in this report, we claim that statistical significance is present at the p =.05 level. In practice, this means that the regression coefficient or value is considered to be different than zero. This level of significance means that the odds of this result happening by chance are small (one chance in 20).

[17] Counties with fewer than 100,000 people are used as a comparison group in the regression model.

dependence on welfare or in changes in self-sufficiency level. Differences in size of county are not a meaningful predictor in this regard.

The failure of county unemployment and size measures to predict changes in the outcome measures does not necessarily mean that the relationships between the various independent measures and outcomes are the same across counties. The analysis tells us that there are significant inter-county differences for all outcomes except self-sufficiency level. These differences could be related to the programs themselves, the demographics of the county, or to other county-level or contextual measures that we did not examine. For instance, employment outcomes may vary due to the extent to which agencies use work experience to fulfill work requirements.

Except for those living with a spouse or partner, assistance group characteristics are not associated with changes in outcomes.

The presence of a spouse or partner in the household reduces the odds that the respondent will be employed (see Table 5). This might reflect the possibility that spouses or partners provide some financial resources that alleviate the need for individuals to find employment or that one of the spouses or partners is disabled and requires care that interferes with the other spouse's or partner's employment.

The finding that transportation is not related to outcomes implies either that transportation is not a problem for anyone or that it is a problem for all, regardless of employment status or level of self-sufficiency.

Table 5. Significance of Selected AG Characteristics on Measuring Changes in Four Key Outcomes

Characteristics at Wave 1	Change from Wave 1 to Wave 2			
	Employment Status	Wages	OWF Status	Self-Sufficiency Level
Number of Individuals in AG	*	*	*	*
Respondent Lives With a Partner or Spouse	Negative Relationship	*	*	*
AG Has a Child Younger Than Six Years	*	*	*	*
Availability of Transportation	*	*	Not Estimated[18]	*

* No relationship

[18] For each of the outcomes, several equations were estimated to test the consistency of the coefficients under different assumptions. The particular model reported on here for the welfare outcome variable did not include the transportation measure.

Welfare tenure, high school education, age, and ethnicity are associated with changes in outcomes.

We hypothesized that the longer an individual's tenure on OWF, the more likely he or she is to have barriers that lead to employment problems. As shown in Table 6, the number of months an individual received cash assistance between October 1997 and his or her wave 1 interview is not a significant predictor of one's ability to get or keep a job, but it is a negative predictor of changes in wages. This means that although these individuals seem to suffer no adverse effects in terms of employment, their wages did not increase as much as the wages of shorter-term OWF users during the interval between wave 1 and wave 2.

Length of time on cash assistance from October 1997 to wave 1 is associated with change in welfare status but not self-sufficiency. This means that individuals who have been on welfare for a long time tend to stay on welfare.

- ***The wages of long-term OWF users do not increase as much as the wages of short-term users.***
- ***Short-term users tend to transition off OWF more than long-term users.***
- ***African Americans outgained others in wage increases but not in self-sufficiency.***
- ***Education was positively correlated with employment and gains in self-sufficiency.***
- ***Wages were less likely to increase for females.***
- ***Employment decreased with age.***

Table 6. Significance of Selected Individual Characteristics on Measuring Changes in Four Key Outcomes

Characteristics at Wave 1	Change from Wave 1 to Wave 2			
	Employment Status	Wages	OWF Status	Self-Sufficiency Level
Number of Months Spent on Cash Assistance (from 10/97 to wave 1)	*	Negative Relationship	Negative Relationship	*
Race/Ethnicity (Being African American)	*	Positive Relationship	*	Negative Relationship
Education (Having Less Than a High School Education)	Negative Relationship	*	*	Negative Relationship
Gender (Being Female)	*	Negative Relationship	*	*
Age	Negative Relationship	*	*	*

* No relationship

African Americans were more likely to have higher wage gains between wave 1 and wave 2 than other individuals, yet they had smaller gains in overall self-sufficiency.

Individuals who did not complete high school were less likely to obtain employment and were less self-sufficient than those who completed high school. Women were less likely to have an increase in wages than men during the period under study, while older individuals were less likely to find employment.

Employment and higher education are associated with increased self-sufficiency, even in the short term.

When various OWF work activities are examined in light of future employment, wages, welfare dependency, and self-sufficiency outcomes, we find that individuals who held unsubsidized jobs as part of their work requirements at wave 1 fared much better by wave 2 than those who were not employed at wave 1 (see Table 7). Those employed at wave 1 were more likely to be employed, off OWF, and more self-sufficient at wave 2 than those who were not working at wave 1.

Table 7. Significance of OWF Work Activity Interventions on Measuring Changes in Four Key Outcomes

Interventions at Wave 1	Change from Wave 1 to Wave 2			
	Employment Status	Wages	OWF Status	Self-Sufficiency Level
Postsecondary Education	Positive Relationship	*	*	Positive Relationship
Unsubsidized Employment	Positive Relationship	*	Negative Relationship	Positive Relationship
Work Experience	*	*	*	*
Job Search	Negative Relationship	*	*	*
Vocational Education	*	*	*	Positive Relationship
Adult Basic Education	*	*	*	*
Developmental/Alternative Work Activities	*	Negative Relationship	*	*

* No relationship

Individuals enrolled in postsecondary education programs at wave 1 also were more likely to be employed and more self-sufficient than others at wave 2. Those enrolled in vocational education programs at wave 1 were more self-sufficient at wave 2 than others, though it is not clear why, as they were no more likely to be employed or off OWF at wave 2 than others. No other wave 1 work activities or program interventions were related to positive outcomes at wave 2.

- ***Those employed at wave 1 were more likely to be employed, off OWF, and self-sufficient at wave 2.***
- ***Those enrolled in postsecondary education at wave 1 were more likely to be employed and self-sufficient at wave 2.***

Several wave 1 activities were negatively associated with outcomes at wave 2. Those engaged in job search activities at wave 1 were less likely than others to be employed at wave 2, while those engaged in developmental and alternative work activities at wave 1 had smaller wage gains than others at wave 2.

IV. Summary and Conclusion

This analysis used information gathered through two waves of data collection on 1,028 individuals who received OWF cash assistance in June 2000. These individuals were first interviewed between June 2000 and March 2001, and again at least six months after the first interview.

Our research was directed at answering two questions.

- Were individuals faring better at the time of the second interview than the first, in terms of employment, wages, welfare dependency, and self-sufficiency?

- Are the work and training opportunities available through CDJFS associated with positive changes in outcomes between individuals' first and second interviews?

The study reveals that the majority of individuals seemed to be faring better during the second interview than the first. Still, the data presented here say nothing about whether the individuals are doing well or are surviving marginally.

With regard to CDJFS work activities, the study indicates that unsubsidized employment is associated with positive outcomes for most OWF clients. Postsecondary education and vocational education are also associated with better self-sufficiency outcomes. These three activities are similar in that they impart very specific skills or experience to individuals. The other work activities do not generally provide individuals with skills, education, or experience that is highly valued in a competitive job market. Activities such as adult basic education and work experience programs are designed to help participants develop basic literacy and math skills and to acclimate those with little previous work experience to basic workplace expectations. While the acquisition and mastery of these skills makes individuals minimally competent, it does not make them competitive in a soft labor market.

Appendix A. Hypotheses

The framework for this study is based on linking outcomes to program interventions. Past studies provide a basis for this framework and guided the selection of variables and the development of hypotheses used in this study. Past studies that were given special attention are listed in Table A.1.

Table A.1. Past Studies Using Analysis Techniques Similar to Those Planned for the Present Study

Abbreviation	Study
BHR	Bloom, H.S., Hill, C.J., & Riccio, J. (2001). Modeling the performance of welfare-to-work programs: The effects of program management and services, economic environment, and client characteristics. (http://www.mdrc.org/Reports2001/EffectsofPrgmMgmt-WkgPpr/EffectsPrgMgmt-Method.pdf)
C	Canny, P.F. (2000). Barriers to employment in the Connecticut Safety Net population. (http://info.med.yale.edu/chldstdy/CTvoices/kidslink/kidslink2/welfare/reform2000/barriers.pdf)
CSB	Coulton, C., Su, M., & Bania, N. (1999). Factors affecting continued employment and return to welfare among persons who left welfare in 1996, Cuyahoga County. (http://povertycenter.cwru.edu/br9901.PDF)
DCD	Danziger, S., Corcoran, M., Danziger, S., Helfin, C., Kalil, A., Levine, J., Rosen, D., Seefeldt, K., Siefert, K., & Tolman, R. (2000). Barriers to the employment of welfare recipients. (http://www.ssw.umich.edu/poverty/wesappam.pdf)
S	Sandfort, J. (1999). Exploring the effect of welfare reform implementation on the attainment of policy goals: An examination of Michigan's counties. (http://www-cpr.maxwell.syr.edu/incomsec/pdf/pp20.pdf)

Some measures that were found to be significant in past studies (e.g., having a major depressive disorder, individual reading ability, and the perception of job discrimination) have no clear analogues in the present study. These measures are not included in the hypotheses described below.

All of the hypotheses are based on findings of past studies, except for the hypotheses about OWF policy and program interventions. Because the present study includes interventions not considered in past studies, and also because variables representing OWF policy and program interventions are of the greatest interest, we go beyond past literature in proposing hypotheses about the OWF interventions to represent in the models. Hypotheses are grouped in terms of the four categories of independent variables:

- County characteristics
- AG characteristics
- Individual characteristics
- OWF policy and program interventions

County Characteristics

The local unemployment rate as a labor market indicator has been examined in the literature and has been shown to have an effect on employment outcomes for cash assistance recipients (see Table A.2). County size, a measure that has not been widely considered in the literature, is included to characterize the wide diversity among Ohio counties.

Table A.2. Hypotheses Related to County Characteristics

Key Variable	Hypothesis	Data Source
Local (County) Unemployment Rates	Being in a high unemployment area is related to worse individual outcomes, because individuals have a harder time finding work in these areas.	Ohio County Indicators Report
County Size	Populous counties tend to provide greater employment opportunities and thus should be positively associated with outcomes.	Census 2000 Statistics

Assistance Group Characteristics

Table A.3 provides the hypotheses pertaining to AG characteristics. The composition of the AG reflects our view that individuals function within an environment that can provide resources through spouses and others, and impose childcare and other demands.

Table A.3. Hypotheses Related to AG Characteristics

Key Variable	Hypothesis	Data Source
AG Size	We would hypothesize that larger AG size is related to better individual outcomes, perhaps because larger AGs are more likely to have individuals (e.g., an older sibling) who can care for children while the head of the AG is at work. On the other hand, very large AG sizes may impose a burden on AG resources.	CRIS-E 3734 files
Living With Spouse or Partner	Our assumption is that the presence of a spouse or partner can provide additional childcare support or financial support.	Survey
Presence of a Child Under Six Years	The presence of a young child can impose childcare burdens and thus may affect employment opportunities.	Survey

Individual Characteristics

The individual characteristics that we include in the models are described in Table A.4.

Table A.4. Hypotheses Related to Individual Characteristics

Key Variable	Hypothesis	Data Source
Welfare History (months receiving welfare from October 1997 to the wave 1 interview)	Long-term receipt of welfare is related to worse individual outcomes, perhaps because a long welfare history is a proxy for persistent problems (e.g., mental illness) that lead to reduced self-sufficiency or well-being.	CRIS-E 3734 files
Age (years)	Studies of the relationship between age and employment and welfare outcomes have demonstrated mixed results. Our expectation is that the probability of employment and welfare independence should decline with age. Factors for this decline may include age discrimination, health problems, or adaptation to the requirements of today's jobs.	CRIS-E 3734 files
Gender	We hypothesize that being male is related to better individual outcomes, consistent with the finding that in the general population, on average, males receive higher wages than females.	CRIS-E 3734 files
Race/Ethnicity	We hypothesize that being African American is related to worse individual outcomes, consistent with the finding that on average, African Americans receive lower wages than the general population.	CRIS-E 3734 files
Education	Having not completed a high school education is related to worse individual outcomes, perhaps because less educated individuals have fewer marketable job skills.	Survey

OWF Policy and Program Interventions

In administering OWF, Ohio has developed some interventions that have not been addressed in past studies. Therefore, the hypotheses shown in Table A.5 use previous studies as a base but then expand the hypotheses.

Table A.5. Hypotheses Related to OWF Policy and Program Interventions

Key Variable	Hypothesis	Data Source
Postsecondary education ("Postsecondary education" in CRIS-E)	Such education is related to better individual outcomes, because it offers marketable skills and educational degrees.	CRIS-E 3734 files
Unsubsidized Employment ("Unsubsidized employment" in CRIS-E)	Employment is related to better individual outcomes, because it offers the opportunity to develop work experience and job skills, and continued employment may bring wage increases.	CRIS-E 3734 files
Work Experience ("On-the-job" and "work experience" in CRIS-E)	Such experience is related to better individual outcomes, perhaps because it is an effective way to gain marketable work experience.	CRIS-E 3734 files
Job Search Training ("Job Club" and "Job Readiness" in CRIS-E)	Such training is related to better individual outcomes, perhaps because it teaches individuals effective strategies for finding work.	CRIS-E 3734 files
Vocational Education ("Vocational education" and "Job skills" in CRIS-E)	Such education is related to better individual outcomes, because it offers marketable job skills or degrees/certificates.	CRIS-E 3734 files
Adult Basic/Remedial Education ("School attendance" and "Education related to employment" in CRIS-E)	Taking such classes is related to worse individual outcomes (BHR), perhaps because individuals who take classes are impaired in educational attainment and have a hard time competing in the job market.	CRIS-E 3734 files
Developmental/ Alternative Work Activities ("Developmental work" and "alternative work" in CRIS-E)	These work activities are related to worse individual outcomes, because individuals who have barriers to self-sufficiency (such as mental health barriers or vocational rehabilitation) that are not addressed in other work activities are assigned to developmental/alternative work activities.	CRIS-E 3734 files

Appendix B. Model Specifications

1. Overview of the Modeling Approach

The purpose of this report is to describe relationships between OWF policy and program interventions received by individuals at wave 1 and the outcomes they experienced at wave 2. These relationships were explored through models of client outcomes. Four separate models were constructed, one for each of the following outcomes:

1. Employment
2. Wages
3. OWF Status
4. Self-Sufficiency

The outcomes were modeled as a function of OWF policy and program interventions, with individual characteristics (e.g., age and race/ethnicity), AG characteristics (e.g., size and youngest child under six years old), and county characteristics (e.g., county size and unemployment rate) included as control variables. That is:

> ***OWF client outcomes = function of (OWF policy and program interventions, individual characteristics, AG characteristics, county characteristics)***

The primary focus is on how OWF policy and program interventions relate to key outcomes because these represent program strategies that can be used to benefit OWF clients. However, since individual, AG, and county characteristics might also be related to client outcomes, it was important to account for their effects in the models in order to determine the marginal effects of OWF policy and program interventions.

The models were based on a multi-level (hierarchical linear modeling (HLM)) approach, where individual OWF clients represent one level and counties represent another. The models described here include two county-level characteristics (i.e., county unemployment rate and county size).

The models were based on data from respondents who completed both wave 1 and wave 2 of the longitudinal survey. The data used in the models involved a mix of survey responses and administrative records from the Ohio Department of Job and Family Services CRIS-E HR 3734 data system. Administrative data were used to supply demographics, work activity participation, and other program participation measures. The survey provided information on employment and wage outcomes.

To prevent ambiguity about the direction of causation, client outcomes at wave 2 were modeled as a function of OWF policy and program interventions, and county, AG, and individual characteristics at wave 1. The independent variables typically represented events that happened during the "wave 1 period" rather than at a single point in time. The wave 1 period is the time between the last three months on OWF and the wave 1 interview. Those who were off OWF for

more than three months at the time of the interview were excluded from the study. As shown in Table B.1, the length of the wave 1 period ranged from three to six months; the earliest month covered in this span was February 2000, and the latest month was March 2001.

The outcome variables typically represent clients' status during the "wave 2 period." For those on OWF at the time of the wave 2 interview and those who have been off OWF for more than three months at wave 2, the wave 2 period is the last three months prior to the wave 2 interview. For those off OWF for less than three months at the time of the wave 2 interview, the wave 2 period is the number of months off OWF plus the three months prior to leaving OWF. These time periods are defined in Table B.1.

Table B.1. Definitions of Wave 1 and Wave 2 Time Periods

Wave 1 Time Period The number of months between the wave 1 interview and the last 3 months on OWF	**August 2000–April 2001** For those on OWF: The 3 months prior to wave 1 interview For those off OWF 3 months or less: Months off plus last 3 months on OWF Off 1 month = 4 months Off 2 months = 5 months Off 3 months = 6 months For those off OWF more than 3 months: Excluded from the analysis
Wave 2 Time Period For those on OWF and for those off OWF for more than 3 months, the 3 months prior to the wave 2 interview For those off OWF 3 months or less, the number of months between the wave 2 interview and the last 3 months on OWF	**May 2001–February 2002** For those on OWF: The 3 months prior to wave 2 interview For those off OWF 3 months or less: Months off plus last 3 months on OWF Off 1 month = 4 months Off 2 months = 5 months Off 3 months = 6 months For those off OWF more than 3 months: The 3 months prior to wave 2 interview

The data collection was timed so that the wave 1 and wave 2 periods never overlapped for a respondent.

2. Definitions of Outcome Variables

Data on OWF outcomes were derived from the following:

- **Employment**

  This measure is taken from the survey data and simply indicates whether the individual was employed when the second interview was conducted.

- **Wages**

  This measure reflects the individual's monthly employment income in dollars, computed from information supplied by respondents to the survey.

- **OWF Status**

  This measure indicates whether the individual is receiving OWF (= 1) or not receiving OWF (= 0), based on survey measures (if available), or on the individual's presence in or absence from the monthly CRIS-E files (if no survey measure is available).

- **Self-Sufficiency**

  This measure represents the individual's ability to meet basic needs without government assistance. Self-sufficiency is measured using the 12-item additive scale shown in Table B.2. Each survey respondent receives a score added across all the measures in the scale. Note that items are coded so that *higher scores* (i.e., 1) indicate *greater self-sufficiency*, and *lower scores* (i.e., 0) indicate *less self-sufficiency*.

Table B.2. Measures Used To Compute the Self-Sufficiency Outcome Variable

Measure	Data Source	Coding
1. Receipt of OWF Cash Grant	CRIS-E Administrative Data	0 = received OWF during the last 6 months, 1 = otherwise
2. Earned Income Disregard	CRIS-E Administrative Data	0 = received disregard since the beginning of the last quarter on OWF, 1 = otherwise
3. Worked for Pay	Survey	1 = worked for pay since beginning of the last quarter on OWF, 0 = otherwise
4. Employment Income Related to Poverty Level	Survey	1 = employment income in most recent job was above the poverty level, 0 = otherwise
5. Food Stamps	CRIS-E Administrative Data	0 = received food stamp benefits since the beginning of the last quarter on OWF, 1 = otherwise
6. Income From Other Public Assistance Sources (Workers Compensation; SSI; Social Security; Veterans; Unemployment; WIC; Disability; Fuel/Energy Assistance)	Survey	0 = received income from any of these sources since the beginning of the last quarter on OWF, 1 = otherwise
7. Employment Income from Other Family Members	Survey	1 = received income from other family members since the beginning of the last quarter on OWF, 0 = otherwise
8. Medicaid	CRIS-E Administrative Data	0 = received Medicaid, 1 = otherwise
9. Subsidized Housing	CRIS-E Administrative Data	0 = received subsidized housing allowance, 1 = otherwise
10. Subsidized Childcare	CRIS-E Administrative Data	0 = received subsidized childcare since the beginning of the last quarter on OWF, 1 = otherwise
11. Uses Emergency Food Assistance	Survey	0 = used meals assistance, food pantry, or kitchen, 1 = otherwise
12. Child Support	Survey	0 = did not receive child support, 1 = otherwise

3. Independent Control Variables

OWF policy and program interventions were examined as potential predictors of client outcomes, with county, AG, and individual characteristics included as control variables.

County, AG, and individual characteristics are viewed primarily as control variables, because they cannot be directly influenced by CDJFS. However, they may exert a powerful influence on client outcomes; therefore, it is important to include these characteristics in the models. These variables are described in Tables B.3, B.4, and B.5.

Table B.3. County Characteristics

Variable	Definition	Data Source
County Unemployment Rate	High county unemployment rate = 1 if rate is 7 percent or more; otherwise variable = 0.	Ohio County Indicators Report
County Size	Two variables were constructed to indicate whether the county size was more than 800,000 people or between 100,000 and 799,999 people. The third category is implicitly represented by the intercept term.	2000 U.S. Census data

Table B.4. AG Characteristics

Variable	Definition	Data Source
AG Size	Number of individuals in the AG at the time of the wave 1 interview	CRIS-E 3734 files
One-Parent Family	The AG is identified as a one-parent family (= 1) for federal work activities reporting. Alternatives (= 0) are two-parent family and child-only cases.	CRIS-E 3734 files
Lives With Spouse or Partner	Living with a spouse or partner at the time of the wave 1 interview (= 1) vs. other (= 0)	Survey
Age of Children	Youngest child in the AG is 0–5 years old at the time of the wave 1 interview (= 1) vs. other (= 0)	Survey
Availability of Transportation	Lack vehicle and have inadequate public transportation at the time of the wave 1 interview (= 1) vs. other (= 0)	Survey

Table B.5. Individual Characteristics

Variable	Definition	Data Source
Welfare History	Number of months on OWF between October 1997 and the wave 1 interview	CRIS-E 3734 files
Wages	Quarterly wages during the quarter of the wave 1 interview (Q3 or Q4 of 2000, or Q1 of 2001)	Survey
Race/Ethnicity	African American (= 1) vs. other (= 0)	CRIS-E 3734 files
Education	Less than high school education at the time of the wave 1 interview (= 1) vs. other (= 0)	Survey
Gender	Female (= 1) vs. other (= 0)	CRIS-E 3734 files
Age	Age in years at the time of the wave 1 interview	CRIS-E 3734 files

Table B.6. OWF Policy and Program Interventions

Variable	Definition	Data Source
Received Earned Income Disregard	Received the earned income disregard during the wave 1 period (= 1) vs. other (= 0)	CRIS-E 3734 files
Postsecondary Education	Participated in postsecondary education in at least one month during the wave 1 period (= 1) vs. other (= 0)	CRIS-E 3734 files
Unsubsidized Employment	Participated in unsubsidized employment in at least one month during the wave 1 period (= 1) vs. other (= 0)	CRIS-E 3734 files
Work Experience ("On-the-job" and "work experience" in CRIS-E)	Participated in unpaid work in at least one month during the wave 1 period (= 1) vs. other (= 0)	CRIS-E 3734 files
Job Search ("Job Club" and "Job Readiness" in CRIS-E)	Participated in job search training in at least one month during the wave 1 period (= 1) vs. other (= 0)	CRIS-E 3734 files
Vocational Education ("Vocational education" and "Job skills" in CRIS-E)	Participated in vocational education in at least one month during the wave 1 period (= 1) vs. other (= 0)	CRIS-E 3734 files
Adult basic/ remedial education ("School attendance" and Education" in CRIS-E)	Participated in adult basic/remedial education in at least one month during the wave 1 period (= 1) vs. other (= 0)	CRIS-E 3734 files
Developmental/ Alternative Work Activities	Participated in developmental/alternative work activities in at least one month during the wave 1 period (= 1) vs. other (= 0)	CRIS-E 3734 files
Receipt of CDJFS/OWF Subsidized Childcare	Received CDJFS or OWF subsidized childcare during the wave 1 period (= 1) vs. other (= 0)	Survey

Appendix C. Regression Results

The following tables present the detailed results of the regression analysis, including coefficients, and their standard error, *t* ratio, and *p* value. They also present the results of the analysis between counties using random effects statistics. Estimates were made using HLM for the Employment and Welfare Status Models (where there are categorical dependent measures) and SAS PROC Mixed for the Wage and Self-Sufficiency Models (where the dependent measures are continuous). For the HLM models using the logistic link function, we can interpret the coefficients in the following manner:

- When the coefficient is larger than zero, the odds of individuals being employed or on cash assistance (welfare status) are greater than their counterparts.

- When the coefficient is less than zero, the odds of individuals being employed or on cash assistance are less than their counterparts.

- When the coefficient is zero, the odds of individuals being employed or on cash assistance are equal to their counterparts.

In either case the *p* value determines significance, with values at $p = 0.05$ or less demonstrating significance.

For models using PROC Mixed, the coefficients indicate that individuals with those characteristics have positive or negative changes in wages or self-sufficiency.

For each dependent variable, we present a model that uses the value of the dependent variable at the second interview. Within each model, we introduce several independent measures that were collected at wave 1 that allow us to examine change in the dependent variable between wave 1 and wave 2. The coefficients therefore represent the change that is associated with each independent measure relative to individuals with some other value for that measure. We also include a time span measure that represents the months between the first and second interviews. This measure protects the model from estimates that may reflect differences in the times between the wave 1 and the wave 2 interviews.

Model 1. Employment Status at the Second Interview

The first model provides information using employment status at the second interview. It should be noted that we included several wave 1 employment measures as predictors. Thus, the coefficients actually represent the effect of the particular measure net of the employment situation at wave 1. Coefficients of less than 0 indicate that the odds of individuals with the associated characteristic being employed at wave 2 are less than for their counterparts, controlling for their status at wave 1. Coefficients greater than 0 indicate that individuals with the associated characteristic are more likely to be employed, controlling for their status at wave 1. A *p* value of .05 or less indicates that the coefficient is significant. Significant coefficients are bolded. The random effect, which measures the variance across counties, indicates that there is significant variation across counties.

Variable	Coefficient	SE	*t* ratio	*P* value
Intercept	–0.81	0.83	–0.967	0.339
African American	–0.05	0.18	–0.256	0.798
At or over time limits, wave 1	0.15	0.25	0.604	0.546
Female	–0.15	0.30	–0.511	0.609
High county unemployment	0.16	0.42	0.380	0.705
In adult basic education, wave 1	–0.13	0.30	–0.423	0.672
In developmental/alternative WA, wave 1	–0.06	0.19	–0.333	0.739
In job search/club, wave 1	**–0.54**	**0.22**	**–2.448**	**0.015**
In postsecondary education, wave 1	**0.50**	**0.24**	**2.134**	**0.033**
In unsubsidized employment, wave 1	**1.47**	**0.16**	**8.962**	**0.000**
In vocational education, wave 1	0.34	0.19	1.808	0.070
In work experience, wave 1	0.10	0.16	0.638	0.523
Large county (pop >= 800,000)	–0.23	0.41	–0.561	0.577
Less than high school education	**–0.47**	**0.17**	**–2.862**	**0.005**
Lives with spouse or partner	**–0.60**	**0.24**	**–2.520**	**0.012**
Medium county (pop 799,999–100,000)	–0.26	0.35	–0.759	0.452
Months between wave 1 and wave 2	0.18	0.09	1.876	0.060
Months receiving OWF, 10/97–wave 1	0.00	0.01	0.114	0.910
Number of individuals in AG	0.01	0.05	0.128	0.899
One-parent AG	–0.49	0.30	–1.624	0.104
Quarters with wages, 10/97–wave 1	**0.06**	**0.02**	**2.727**	**0.007**
Received CDJFS/OWF childcare, wave 1	–0.11	0.22	–0.509	0.610
Received earned income disregard, wave 1	**0.98**	**0.31**	**3.142**	**0.002**
Respondent age (years)	**–0.03**	**0.01**	**–2.295**	**0.022**
Transportation problems	–0.26	0.21	–1.249	0.212
Wages at wave 1	**0.00**	**0.00**	**3.526**	**0.001**
Youngest child five or under	–0.27	0.20	–1.388	0.165
	Standard Deviation	**Variance Component**	**Chi Square**	***P* value**
County Differences (Random Effect)	**0.31**	**.10**	**62.67**	**0.033**

Model 2. Wages at the Second Interview

This model provides information on changes in wages between the first and second interviews for those who received wages during the first interview. Controlling for wages at wave 1, coefficients of less than 0 indicate that wages decreased, and coefficients larger than 0 indicate that wages increased. The coefficients can actually be interpreted as marginal dollars added or subtracted from the mean wage at wave 2, given wages at the first interview. A *p* value of .05 or less indicates that the coefficient is significant. Significant coefficients are bolded.

Variable	Coefficient	SE	*t* ratio	*P* value
Intercept	**1,083.93**	**307.17**	**3.53**	**0.0013**
African American	**170.74**	**67.65**	**2.52**	**0.012**
Female	**–254.19**	**110.63**	**–2.3**	**0.0221**
High county unemployment	13.15	110.40	0.12	0.9060
In adult basic education, wave 1	–117.39	117.41	–1.00	0.3181
In developmental/alternative WA, wave 1	**–152.55**	**72.39**	**–2.11**	**0.0358**
In job search/club, wave 1	59.61	88.24	0.68	0.4997
In postsecondary education, wave 1	57.74	76.37	0.76	0.4501
In unsubsidized employment, wave 1	–74.31	76.33	–0.97	0.3309
In vocational education, wave 1	72.17	68.50	1.05	0.2928
In work experience, wave 1	–55.74	57.49	–0.97	0.3329
Large county (pop >= 800,000)	161.88	113.48	1.43	0.1634
Less than high school education	–54.34	68.54	–0.79	0.4284
Lives with spouse or partner	53.97	88.84	0.61	0.5439
Medium county (pop 799,999–100,000)	199.23	98.67	2.02	0.0519
Months between wave 1 and wave 2	67.16	33.92	1.98	0.0485
Months receiving OWF, 10/97–wave 1	**–9.12**	**3.19**	**–2.86**	**0.0045**
Number of individuals in AG	–18.16	22.17	–0.82	0.4132
One-parent AG	–76.04	112.25	–0.68	0.4986
Received CDJFS/OWF childcare, wave 1	93.20	74.36	1.25	0.2109
Respondent age (years)	–0.83	4.35	–0.19	0.8479
Transportation problems	31.45	79.65	0.39	0.6932
Youngest child five or under	74.30	70.61	1.05	0.2934
Wages at wave 1	**0.29**	**0.06**	**4.63**	**<.0001**
Employed, wave 1	–126.91	80.20	–1.58	0.1144
Received earned income disregard, wave 1	141.47	133.58	1.06	0.2903
	Estimate	**SE**	**Z -value**	***P* value**
County Differences (Random Effect)	**0.00**	**.**	**.**	**.**

Model 3. Welfare Status at the Second Interview

Model 3 provides information using welfare status (receiving or not receiving cash assistance) at the second interview. As in all models that focus on wave 2 outcomes, we are measuring change. Coefficients of less than 0 indicate that individuals with the associated characteristic are less likely to be receiving OWF cash assistance at wave 2 than their counterparts, and coefficients greater than 0 indicate that they are more likely to receive cash assistance. A *p* value of .05 or less indicates that the coefficient is significant. Significant coefficients are bolded. The random effect is displayed at the bottom of the table.

Variable	Coefficient	SE	*t* ratio	*P* value
Intercept	**5.807**	**1.09**	**5.350**	**0.000**
African American	0.03	0.20	0.149	0.882
At or over time limits, wave 1	**–0.69**	**0.34**	**–2.024**	**0.043**
Female	0.57	0.33	1.745	0.081
High county unemployment	0.46	0.54	0.85	0.399
In adult basic education, wave 1	0.43	0.32	1.339	0.181
In developmental/alternative WA, wave 1	0.30	0.20	0.491	0.136
In job search/club, wave 1	0.12	0.23	0.522	0.601
In postsecondary education, wave 1	–0.29	0.28	–1.044	0.297
In unsubsidized employment, wave 1	**–0.55**	**0.20**	**–2.758**	**0.006**
In vocational education, wave 1	–0.39	0.21	–1.854	0.063
In work experience, wave 1	–0.10	0.18	–1.592	0.553
Large county (pop >= 800,000)	0.22	0.54	0.415	0.680
Less than high school education	0.28	0.18	1.559	0.119
Lives with spouse or partner	–0.22	0.26	–0.831	0.406
Medium county (pop 799,999–100,000)	0.17	0.44	0.391	0.697
Months between wave 1 and wave 2	**–1.36**	**0.21**	**–6.370**	**0.000**
Number of individuals in AG	–0.06	0.06	–1.020	0.308
One-parent AG	0.17	0.32	0.519	0.604
Respondent age (years)	0.02	0.01	1.515	0.130
Youngest child five or under	–0.07	0.21	–0.344	0.730
Months on welfare	**–.072**	**0.01**	**6.920**	**0.000**
Received earned income disregard, wave 1	**–1.36**	**0.32**	**–4.252**	**0.000**
	Standard Deviation	**Variance Component**	**Chi Square**	***P* value**
County Differences (Random Effect)	**0.54**	**.30**	**86.83**	**0.000**

Model 4. Self-Sufficiency at the Second Interview

This model provides information on self-sufficiency at the second interview. Because we added a wave 1 self-sufficiency measure as an independent measure, the coefficients measure change. Controlling for self-sufficiency at wave 1, coefficients of less than 0 indicate that self-sufficiency decreased, and coefficients greater than 0 indicate that self-sufficiency increased. A *p* value of .05 or less indicates that the coefficient is significant. Significant coefficients are bolded.

Variable	Coefficient	SE	*t* ratio	*P* value
Intercept	**3.57**	**0.61**	**5.82**	**<.0001**
African American	**–0.35**	**0.14**	**–2.55**	**0.0108**
Female	–0.052	0.21	–0.25	0.8052
High county unemployment	–0.18	0.30	–0.59	0.557
In adult basic education, wave 1	–0.29	0.22	–1.3	0.1927
In developmental/alternative WA, wave 1	–0.17	0.14	–1.24	0.2143
In job search/club, wave 1	–0.03	0.16	–0.19	0.8491
In postsecondary education, wave 1	**0.52**	**0.17**	**3.01**	**0.0027**
In unsubsidized employment, wave 1	**0.50**	**0.12**	**4.23**	**<.0001**
In vocational education, wave 1	**0.34**	**0.14**	**2.48**	**0.0134**
In work experience, wave 1	0.02	0.11	0.17	0.8675
Large county (pop >= 800,000)	0.024	0.29	0.08	0.9345
Less than high school education	**–0.38**	**0.12**	**–3.16**	**0.0016**
Lives with spouse or partner	–0.09	0.17	–0.54	0.5859
Medium county (pop 799,999–100,000)	0.02	0.25	0.08	0.9366
Months between wave 1 and wave 2	–0.045	0.069	–0.66	0.5105
Months receiving OWF, 10/97–wave 1	–0.01	0.01	–0.86	0.3881
Number of individuals in AG	0.005	0.04	0.13	0.8929
One-parent AG	–0.21	0.22	–0.99	0.3231
Received CDJFS/OWF childcare, wave 1	–0.13	0.16	–0.81	0.4154
Respondent age (years)	–0.00	0.00	–0.37	0.7105
Transportation problems	–0.08	0.15	–0.51	0.6102
Youngest child five or under	–0.20	0.14	–1.4	0.1608
Exceeds time limits	0.34	0.19	1.83	0.0679
	Estimate	**SE**	**Z value**	***P* value**
County Differences (Random Effect)	0.05	0.05	1.14	0.1265